

FIG. 1A

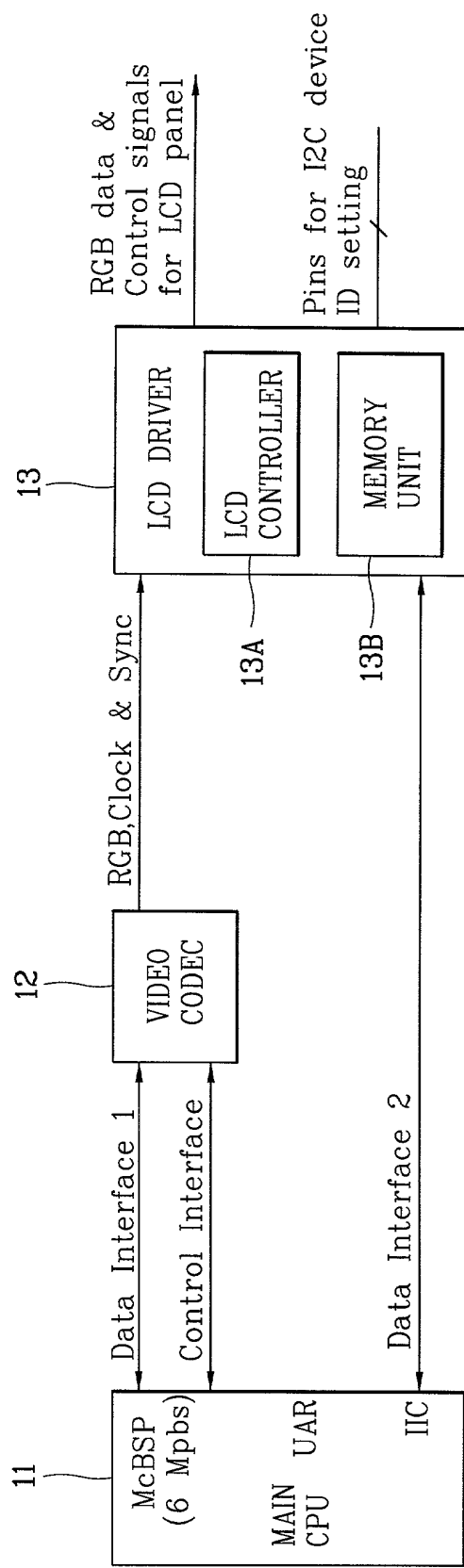


FIG. 1B

3 Mode Operation

Active Mode(Data Interface 1):

- JPEG,GIF
- MPEG4
- MP3(128kbps).AAC
- Animation(Game)
- Text Service

Standby Mode(Data Interface 2):

- Animation, Still Image & Text, Text only

Power Down Mode

- LCD Driver IC power off, but SRAM is alive

Display Scheme

Active Mode

- Normal Operation
- Main CPU, Video CODEC and LCD driver IC are all alive
- LCD display frame rate of ~30 frames/sec

Standby Mode

- Power Saving Mode(Video CODEC is powered off)
- Animation or Still Image & Text or Text can be displayed
- LCD display frame rate of ~5 frames/sec

Power Down Mode

- Nothing is displayed, Ready for displaying

FIG. 2

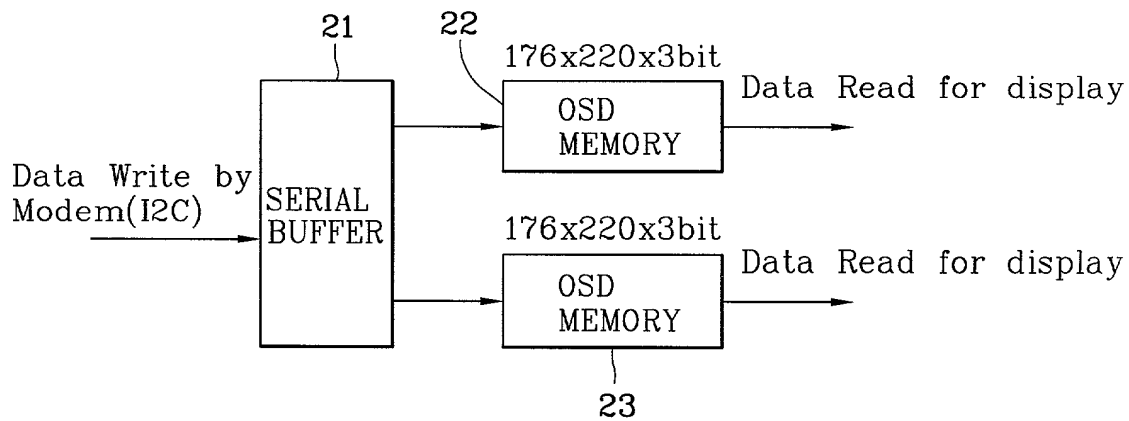
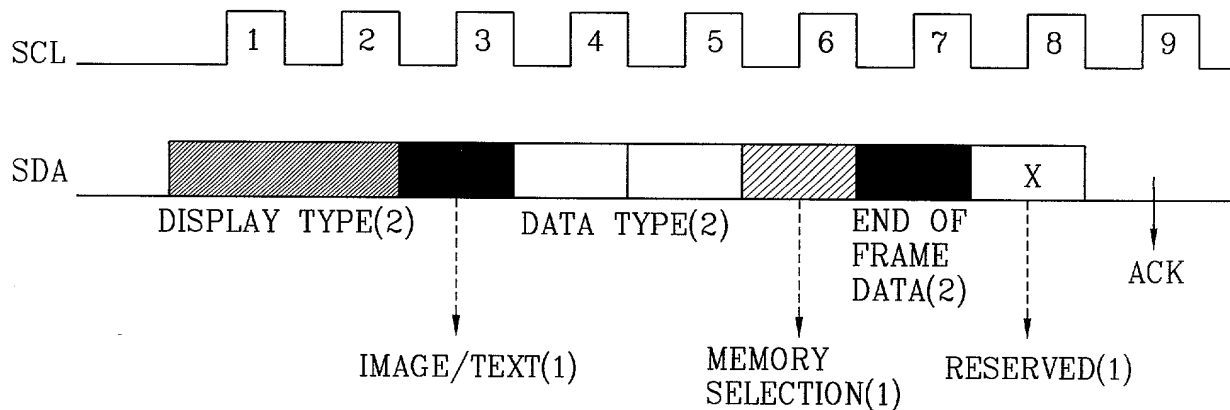


FIG. 3



DISPLAY TYPE(2bits)
 00: ANIMATION
 01: STILL IMAGE & TEXT
 10: TEXT ONLY
 11: REGISTER CONTROL

IMAGE/TEXT(1bit)
 0: TEXT DATA
 1: IMAGE DATA

DATA TYPE(2bit)
 00: BURST DATA
 01: AREA DATA
 10: LINE DATA
 11: PIXEL DATA

OSD MEMORY SELECTION(1bit)
 0: OSD MEMORY 1(FIRST)
 1: OSD MEMORY 2(SECOND)

END OF FRAME DATA(1bit)
 0: NOT EOFD
 1: EOFD

FIG. 4

IMAGE DATA REPRESENTATION(3bits)

000: BLACK
 001: BLUE
 010: GREEN
 011: CYAN
 100: RED
 101: MAGENTA
 110: YELLOW
 111: WHITE

TEXT DATA REPRESENTATION(1bit)

0: BACKGROUND DATA
 1: TEXT DATA

FIG. 5

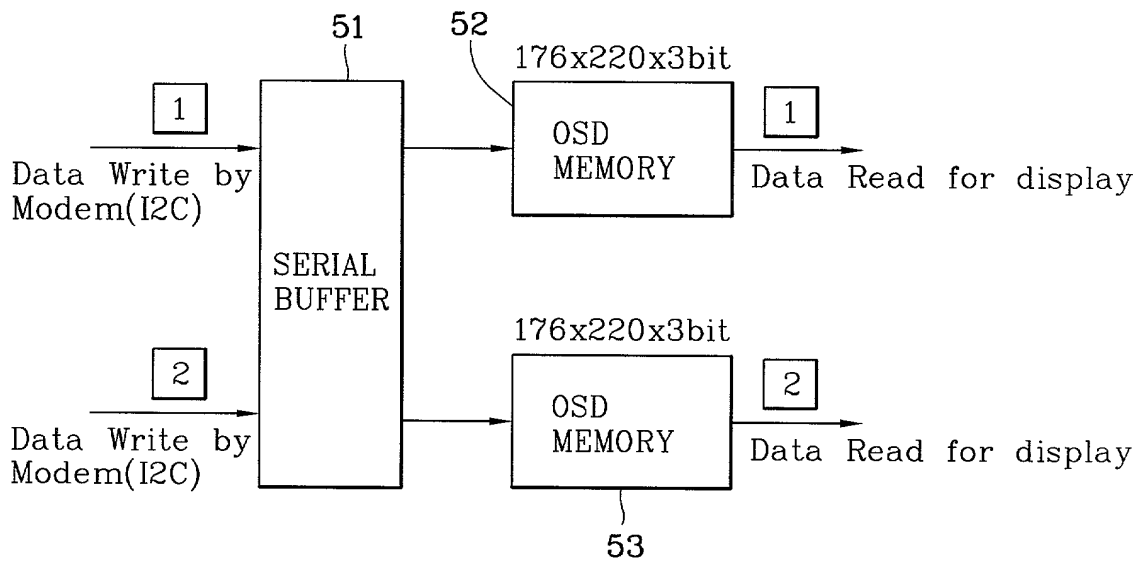


FIG. 6

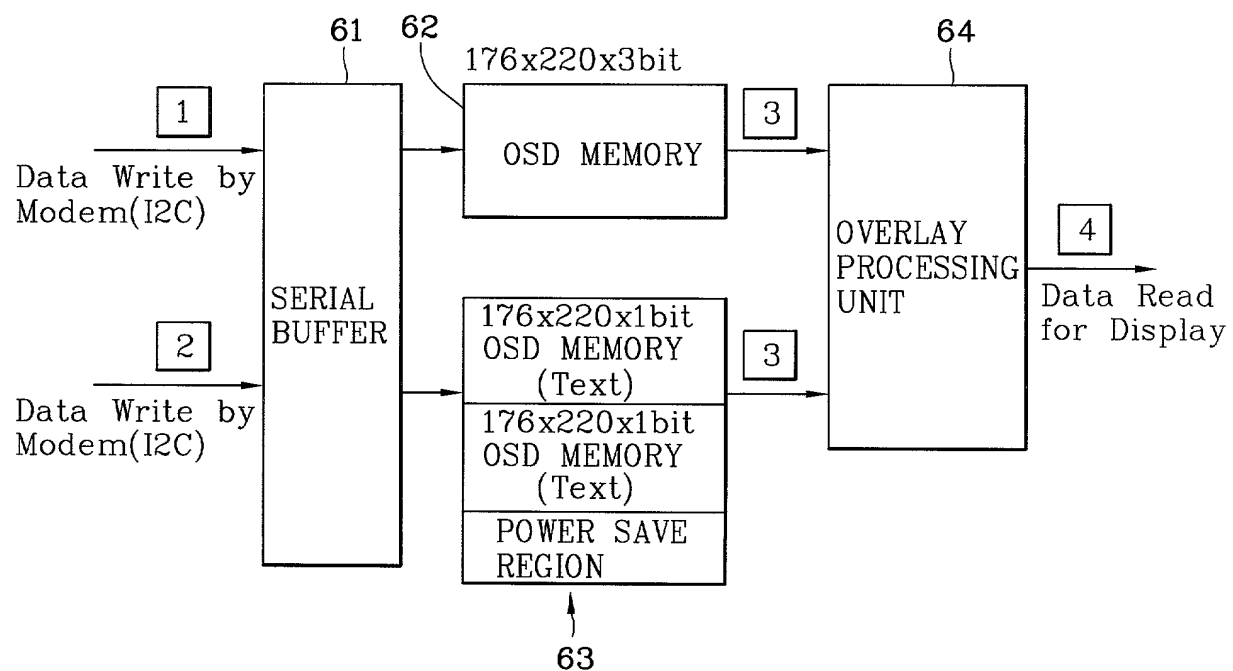


FIG. 7

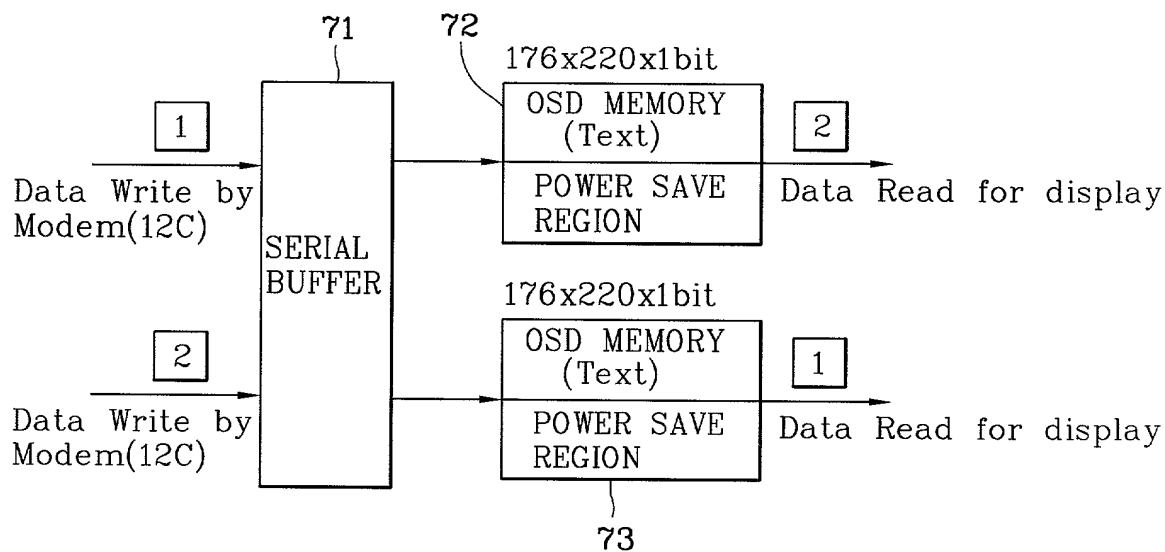
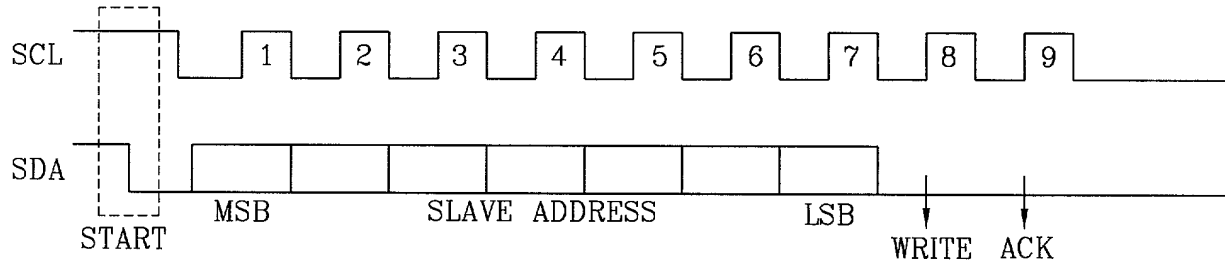
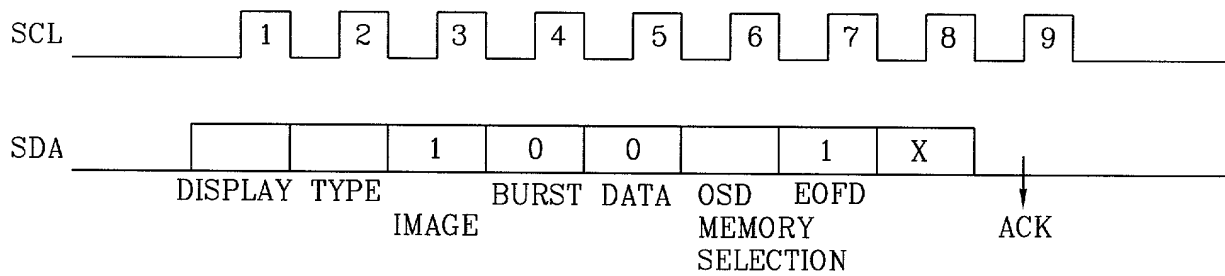


FIG. 8A

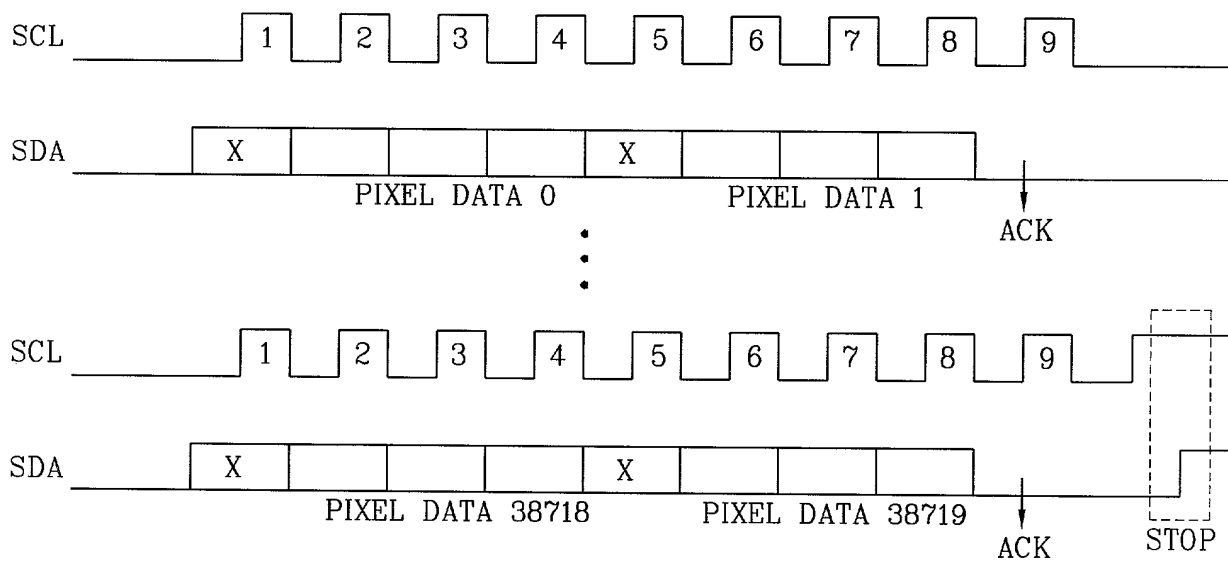
CASE 1. BURST DATA WRITE(IMAGE) SLAVE ADDRESS TRANSFER



MODE SETTING



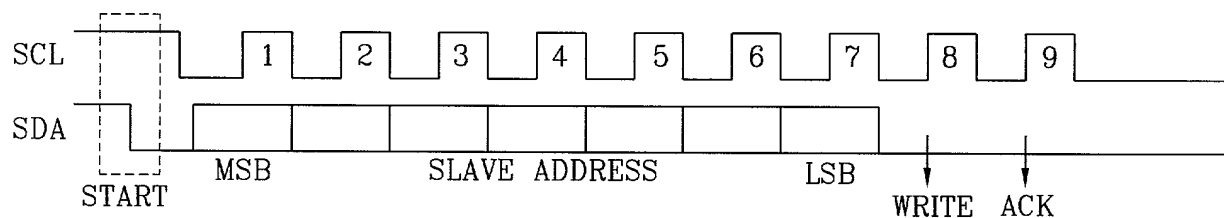
PIXEL DATA TRANSFER



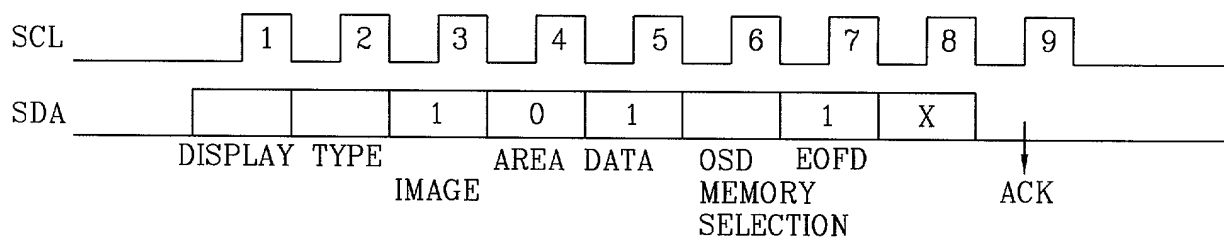
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FIG. 8B

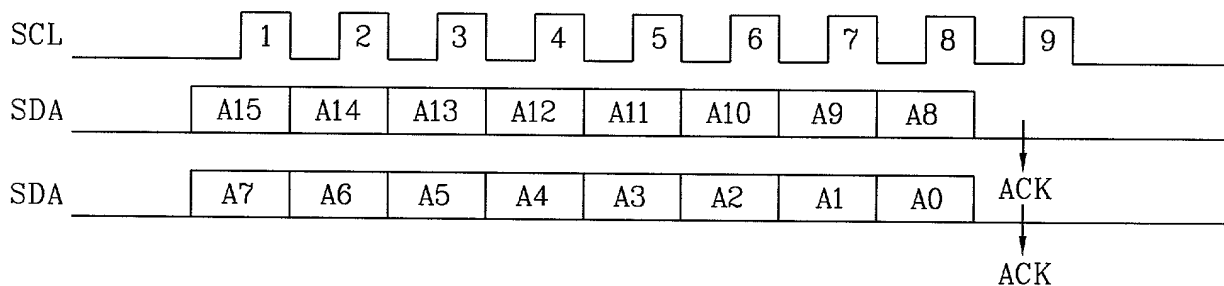
CASE 2. AREA DATA WRITE(IMAGE) SLAVE ADDRESS TRANSFER



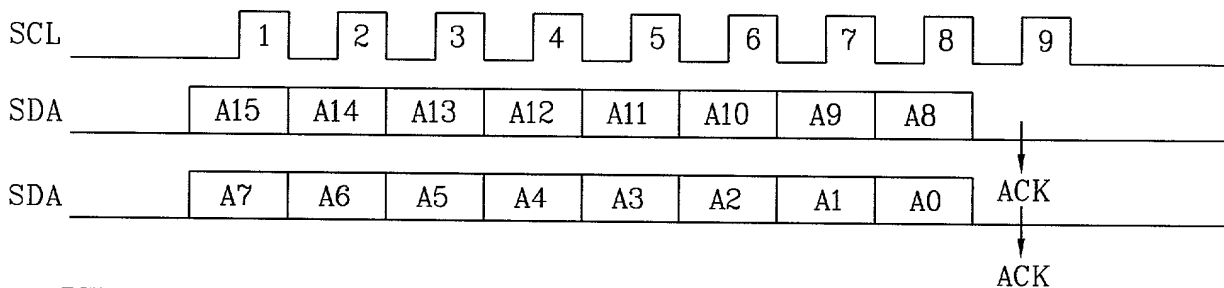
MODE SETTING



AREA START ADDRESS TRANSFER



AREA END ADDRESS TRANSFER



PIXEL DATA TRANSFER

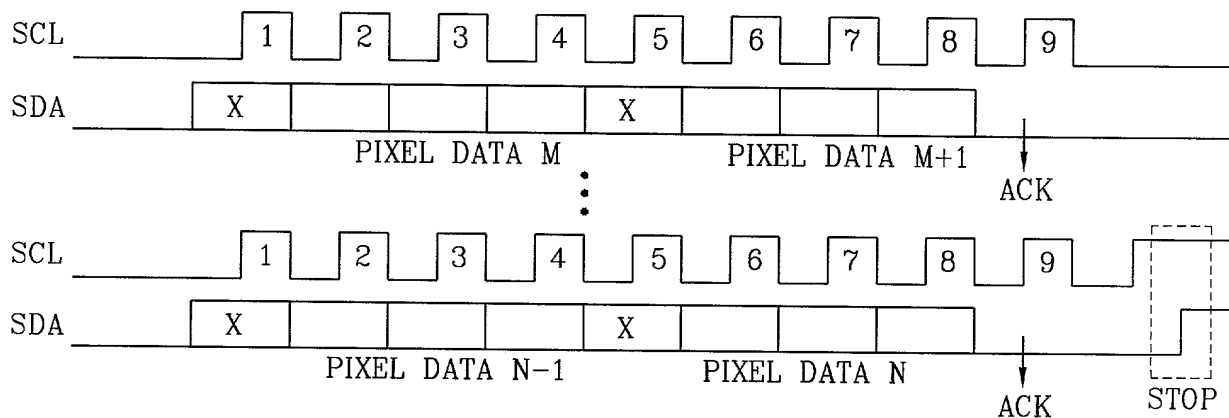
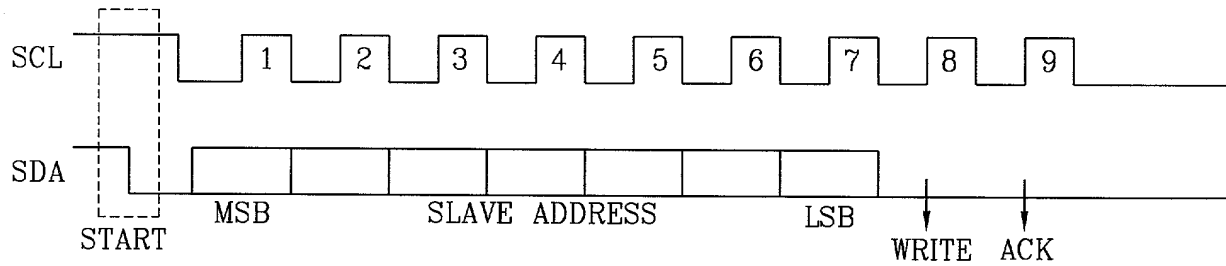
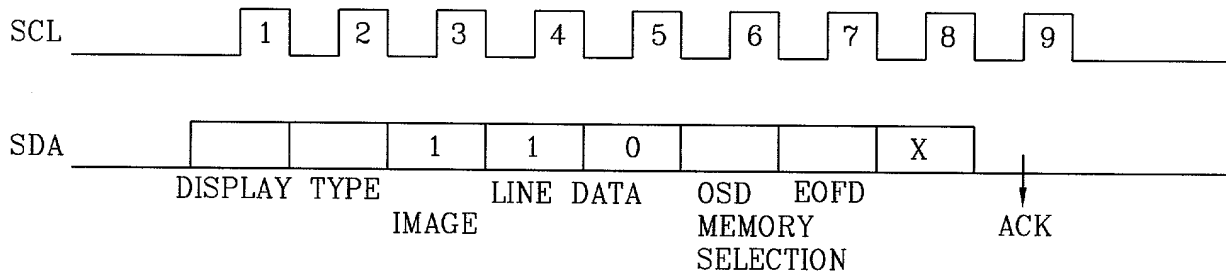


FIG. 8C

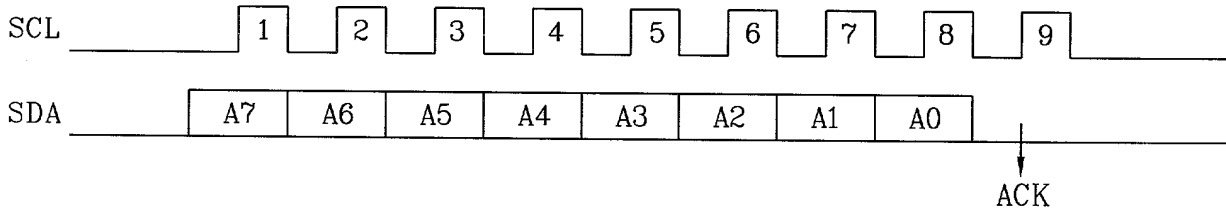
CASE 3. LINE DATA WRITE(IMAGE) SLAVE ADDRESS TRANSFER



MODE SETTING



LINE ADDRESS TRANSFER



PIXEL DATA TRANSFER

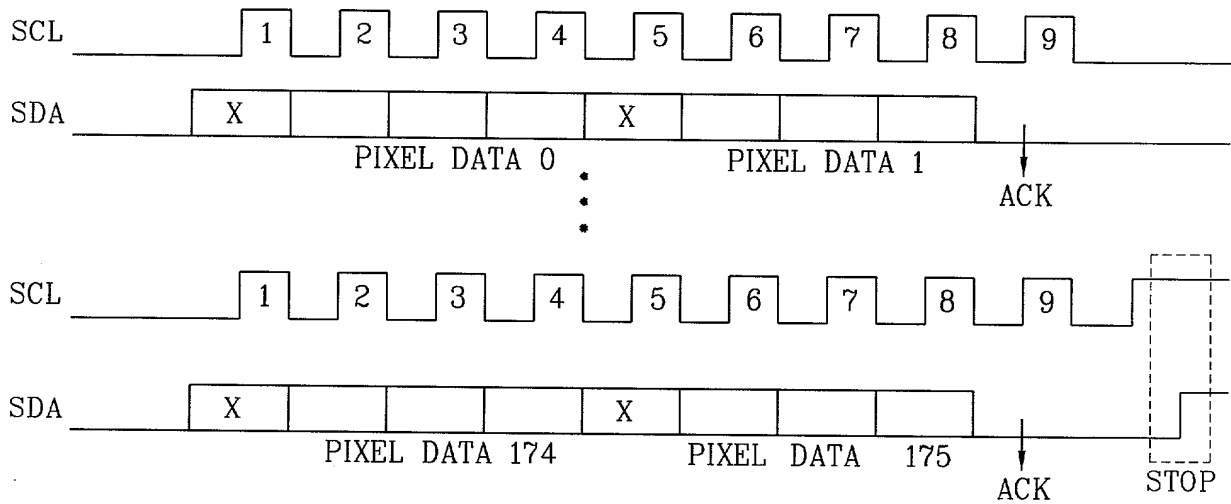
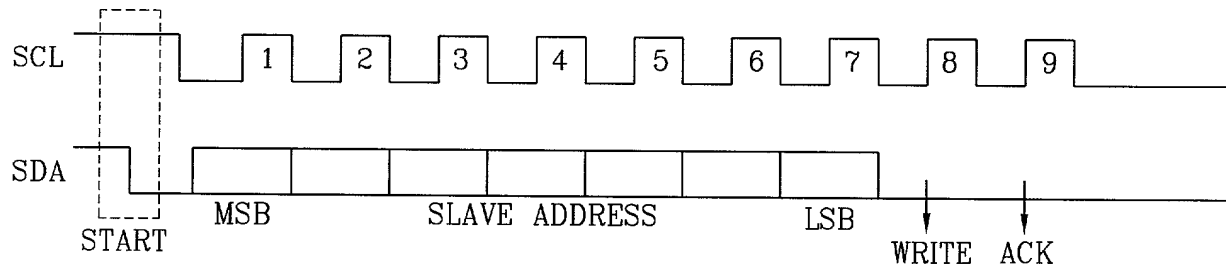
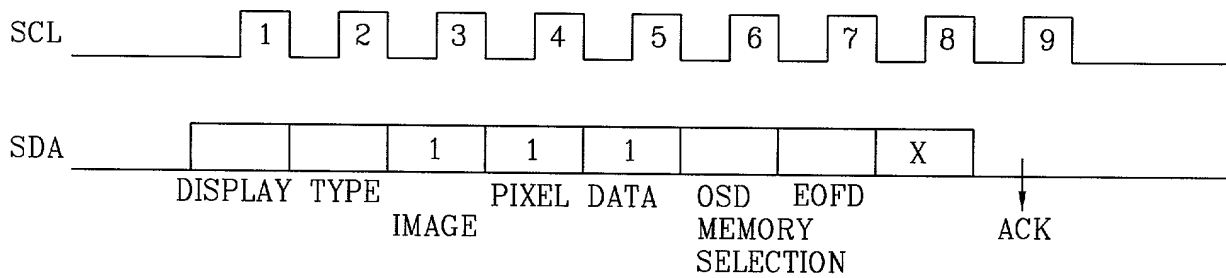


FIG. 8D

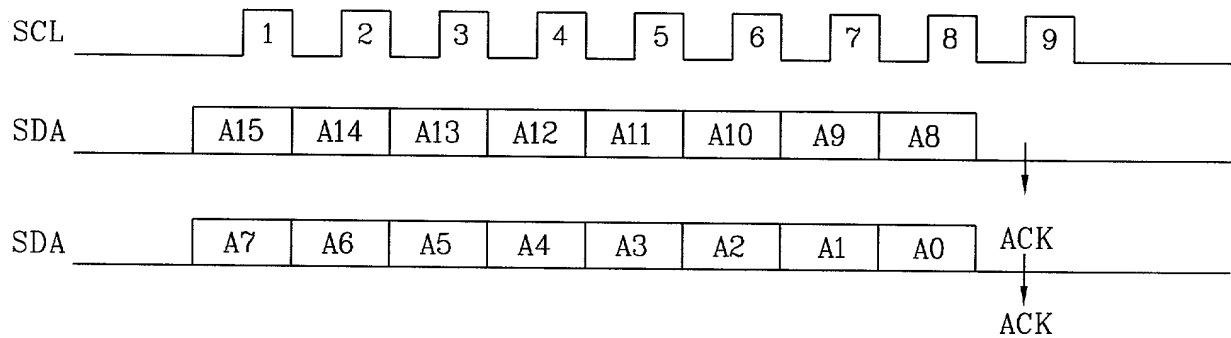
CASE 4. PIXEL DATA WRITE(IMAGE) SLAVE ADDRESS TRANSFER



MODE SETTING



PIXEL ADDRESS TRANSFER



PIXEL DATA TRANSFER

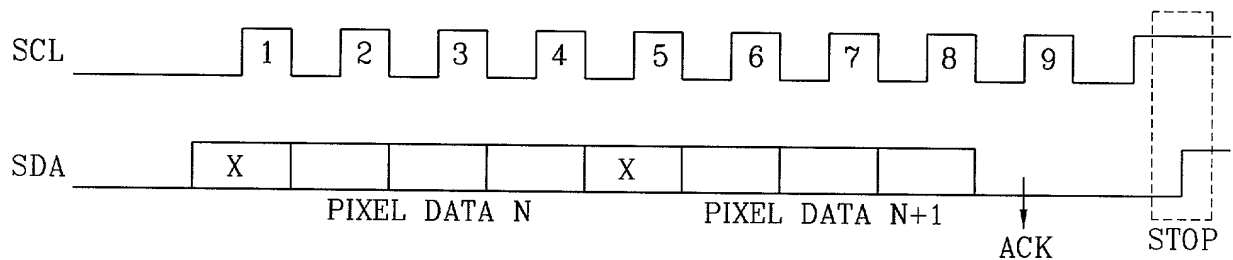
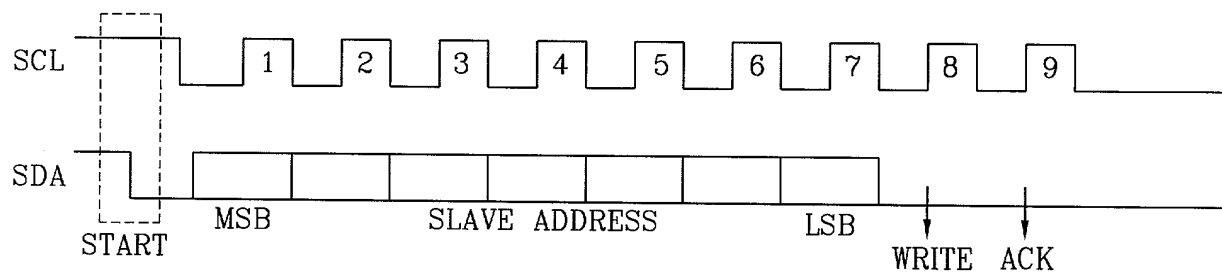
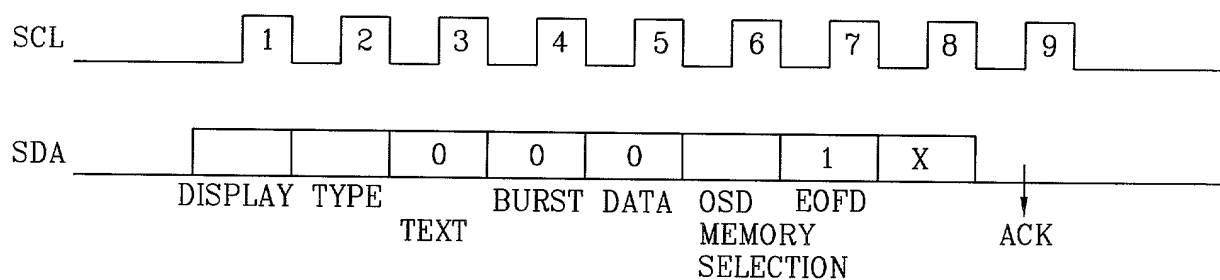


FIG. 8E

CASE 5. BURST DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



MODE SETTING



TEXT DATA TRANSFER

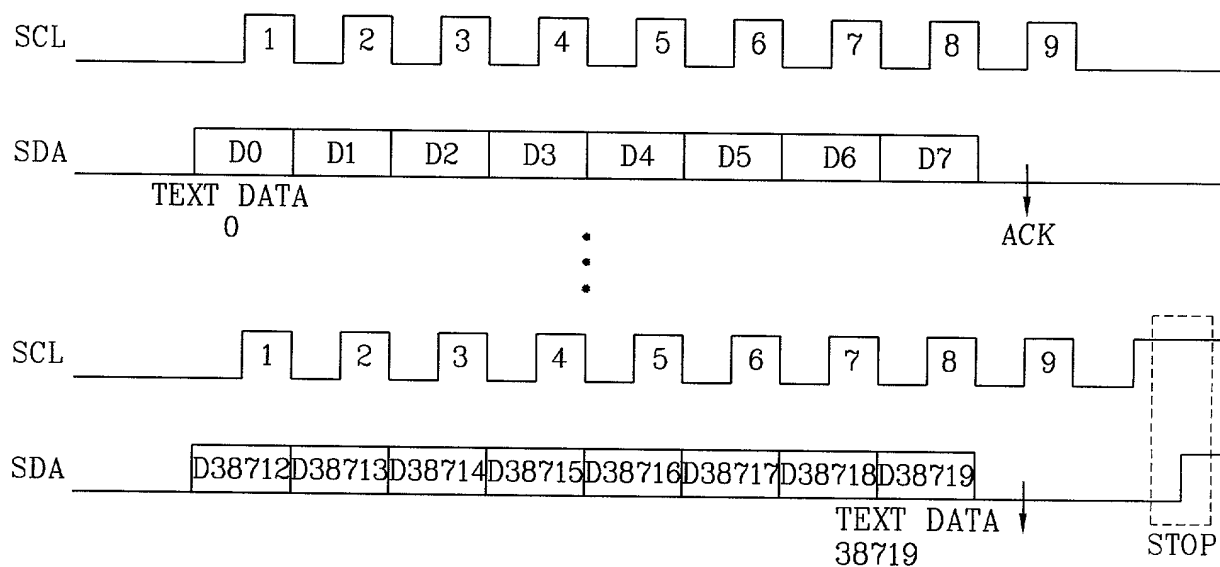
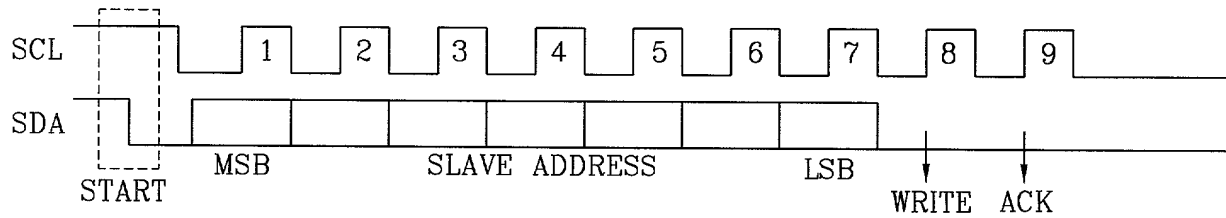
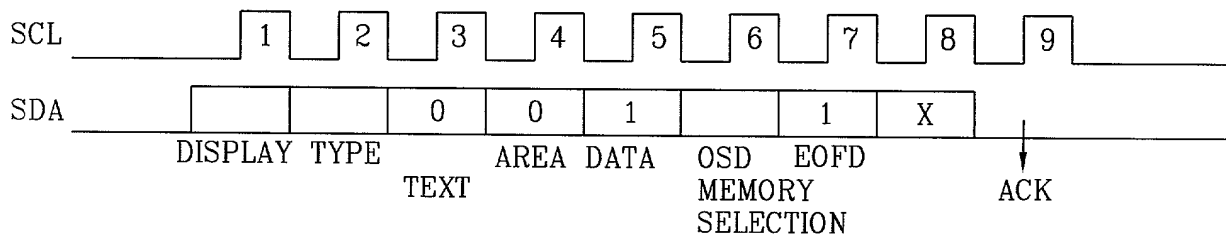


FIG. 8F

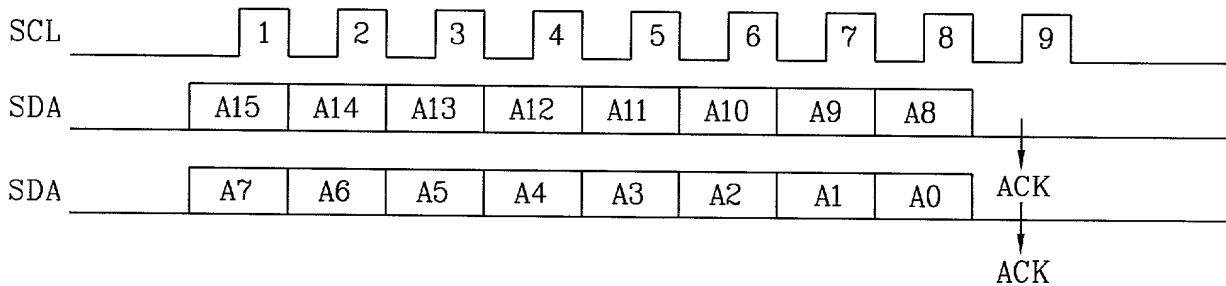
CASE 6. AREA DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



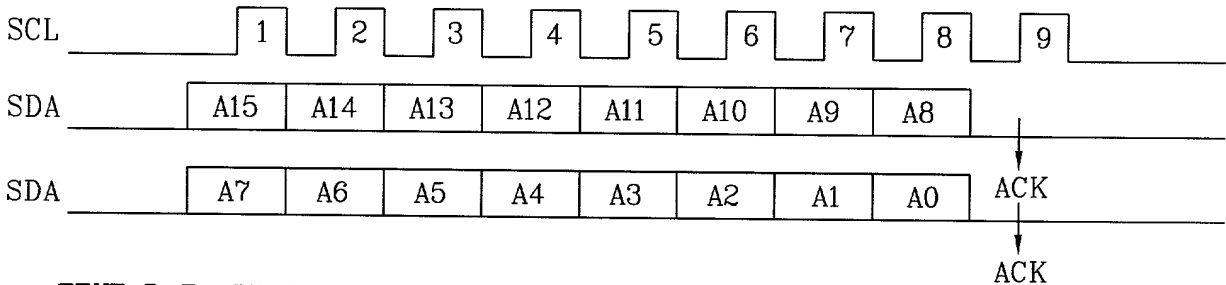
MODE SETTING



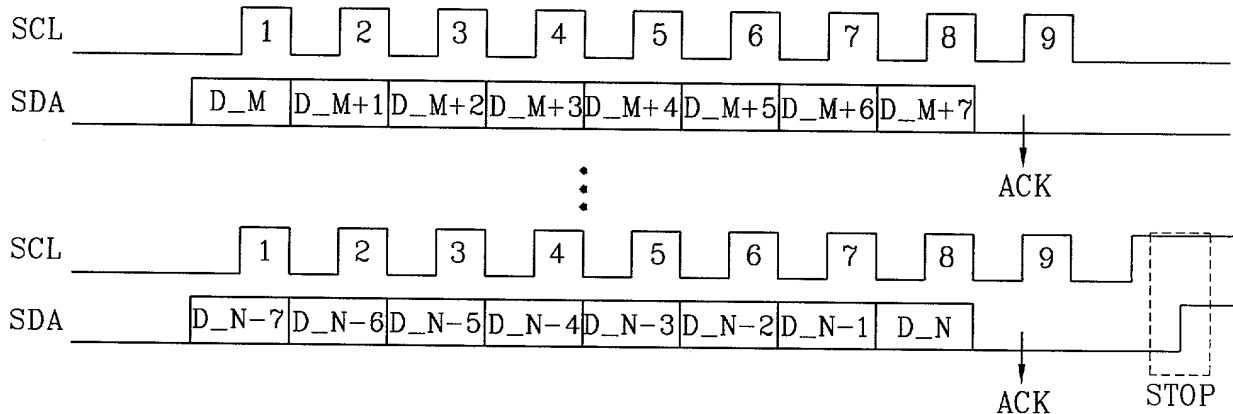
AREA START ADDRESS TRANSFER



AREA END ADDRESS TRANSFER



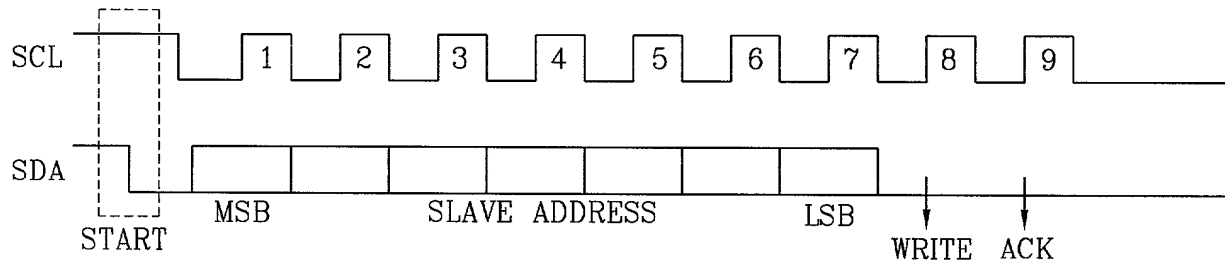
TEXT DATA TRANSFER



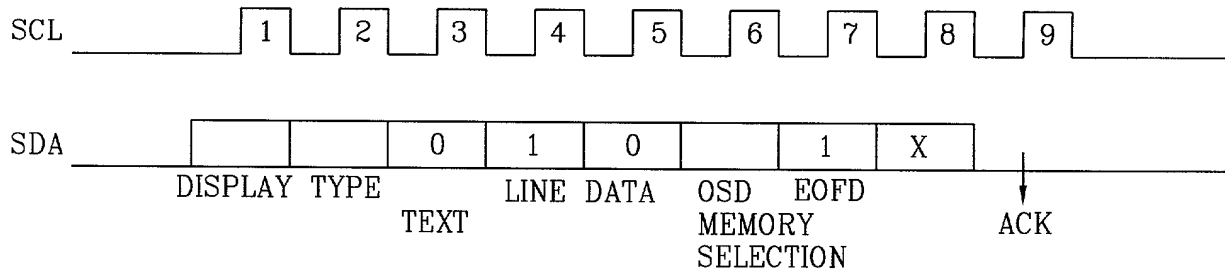
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FIG. 8G

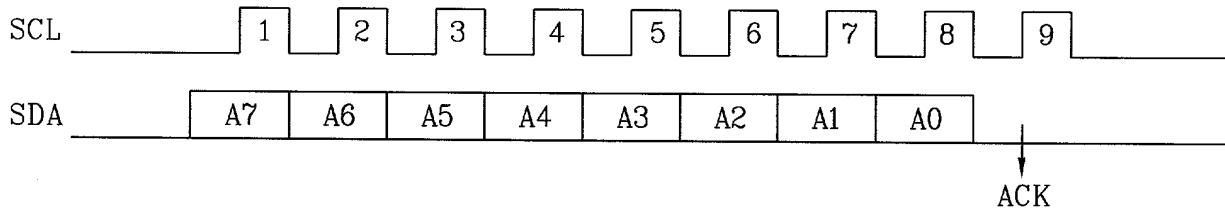
CASE 7. LINE DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



MODE SETTING



LINE ADDRESS TRANSFER



TEXT DATA TRANSFER

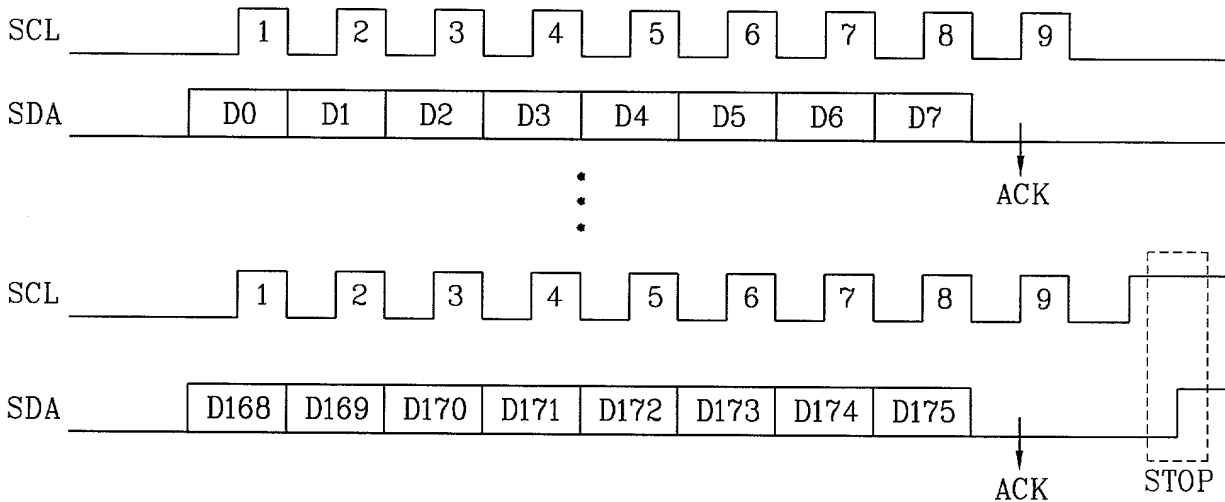
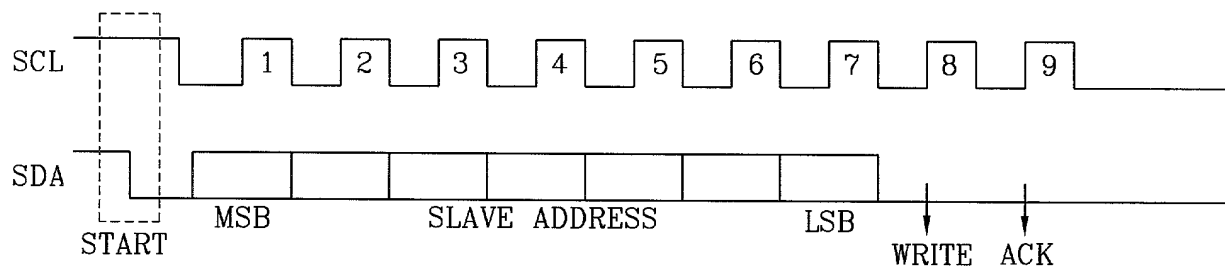
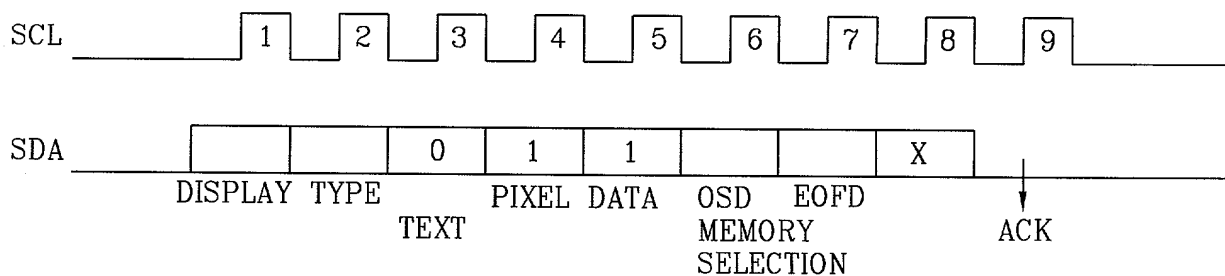


FIG. 8H

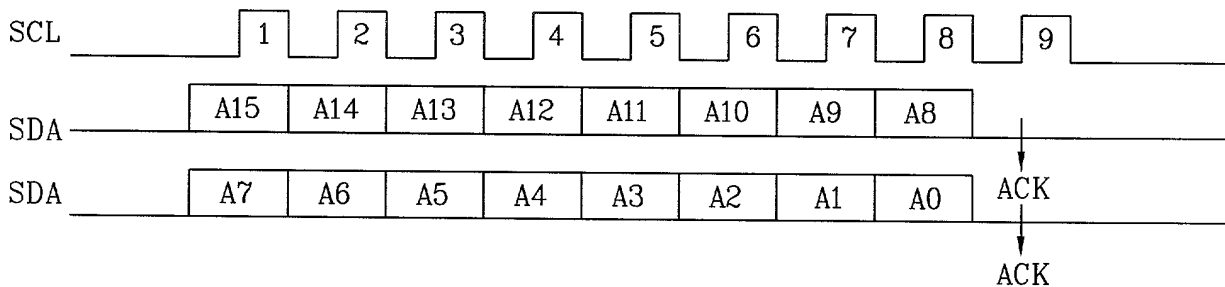
CASE 8. PIXEL DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



MODE SETTING



PIXEL ADDRESS TRANSFER



TEXT DATA TRANSFER

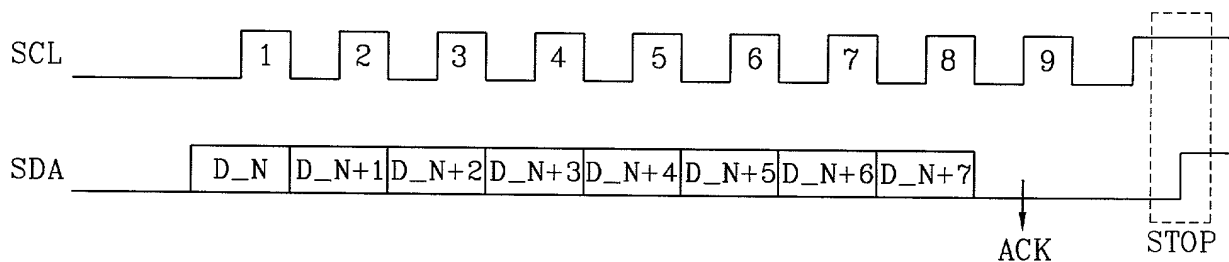


FIG. 9

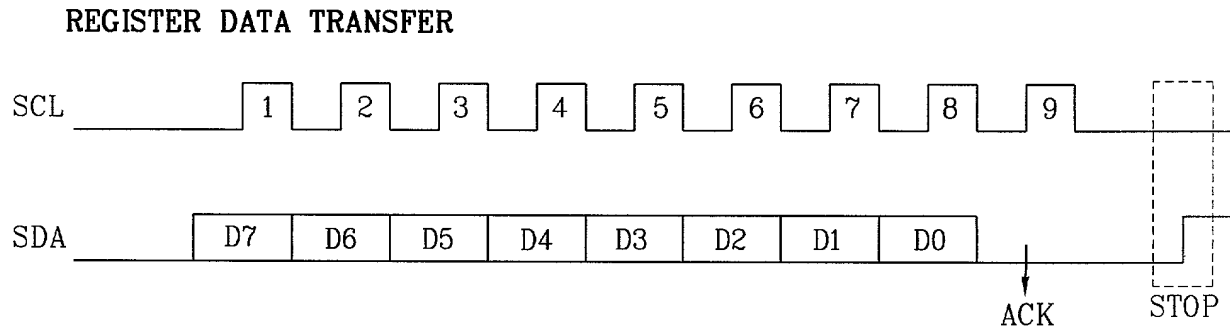
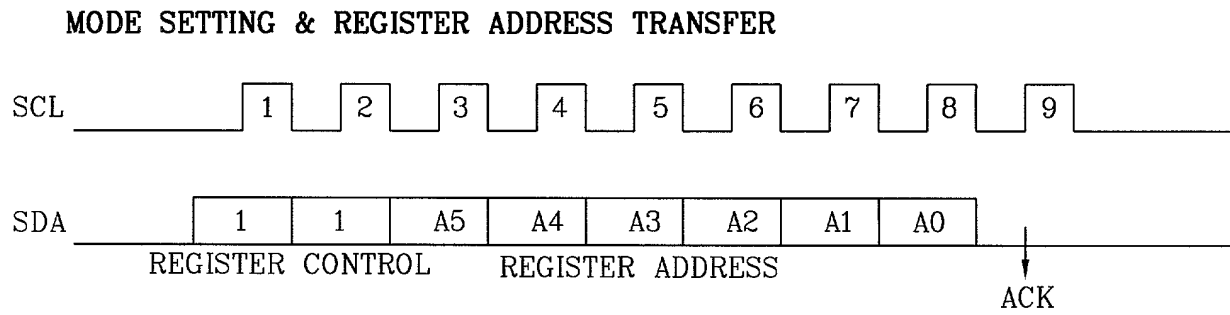
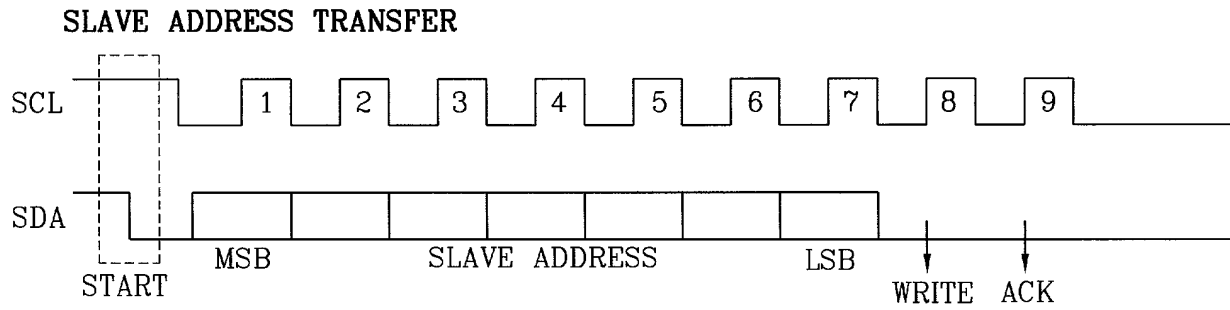


FIG. 9